

10. RECORD OF BURMESE PYTHON *PYTHON MOLURUS BIVITTATUS* AND ITS CONSERVATION STATUS IN CORBETT TIGER RESERVE, UTTARAKHAND, INDIA¹

ASGHAR NAWAB² AND AMIT K. SRIVASTAVA³

¹Accepted February 21, 2008

²Freshwater & Wetlands Programme, WWF-India (Secretariat), 172-B Lodi Estate, New Delhi 110 003, India.

Email: anawab@wwfindia.net

³A-106, Beta 1, Greater Noida 201 301, Uttar Pradesh, India. Email: amitcorbett@gmail.com

Two species of python (Family: Boidae) – *Python molurus* (Linnaeus) and *P. reticulatus* (Schneider), and two subspecies of *Python molurus* – *P.m. molurus* and *P.m. bivittatus* – are reported from India. These subspecies differ based on the following morphological characters: in *P.m. molurus* 6th or 7th labial contact the eye, lance-shaped mark on the top of the head is indistinct in adults and the tongue is pink, while in *P.m. bivittatus* the labials are separated from the eye by suboculars, lance-shaped mark on the head is distinct (even in adults) (Fig. 1), and the tongue is blue-black (Smith 1943; Daniel 2002; Whitaker and Captain 2004). Both the subspecies grows up to 6-8 m in length, occur in dense as well as in open grasslands or in rocky outcrops along rivers and *jheels* (Daniel 2002). They mostly feed on warm-blooded animals, such as birds and mammals. *Python molurus* has a wide distribution in India (Smith 1943; Daniel 2002; Bhupathy 1995; Whitaker and Captain 2004). Though confirmed distributional records of *P.m. bivittatus* from India are sketchy, confirmed reports are available from North-east, Orissa (Bhitarkanika Wildlife Sanctuary) and Uttarakhand (Rajaji National Park) (Bhupathy 1995).

Two consecutive observations of adult *P.m. bivittatus* were made in the Corbett Tiger Reserve (29° 25'-29° 40' N; 78° 5'-79° 5' E) in Uttarakhand, India. The first observation was made on December 28, 2004 in the grasslands (locally called *chaur*) of Dhara Range, and the other was made on

June 19, 2006 near the Dhangari gate in the Dhikala Range. On both the instances, the identification features described by Smith (1943), Daniel (2002), and Whitaker and Captain (2004) fitted well. These observations constitute the first record from this protected area and form an additional locality record for this subspecies in northern India. Moreover, it forms an addition (at subspecies level) to the existing checklist of 22 species of snakes reported from the Reserve (Chopra 1979).

It is worth noting that *P.m. molurus* and *P.m. bivittatus* occur sympatrically. Are they really subspecies or distinct species is yet to be determined based on DNA studies. How do they share the resources in their sympatric ranges if they are distinct species? Moreover, *P.m. bivittatus* is a Malayan faunal element, and there are a few recent records of species such as (1) Tree Frog *Chirixalus* sp. (2) Tricarinate Hill Turtle *Melanochelys tricarinata* and (3) Copper-head Ratsnake *Elaphe radiata* near Dehradun, Uttarakhand (Bhupathy 1995), knowledge on the extent of invasion of Malayan reptilian elements in India remains scanty and is largely based on old records by Smith (1943).

The Corbett Tiger Reserve forms an important repository of the natural heritage of Uttarakhand and is one of the best-protected areas of the Sal forest in Siwalik ranges, perhaps the last refuge of a number of threatened animal species in the Himalayan Bhabar tract.

ACKNOWLEDGEMENTS

The observations were made during the Study on Ecology of Otters in Corbett Tiger Reserve: Impact of Kalagarh reservoir on habitat use pattern. We wish to place on record our indebtedness to the Forest Department, Uttarakhand; Director, Wildlife Institute of India, Dehradun and Dr. S.A. Hussain, Principal Investigator of the Project. We are grateful to Romulus Whitaker and Ashok Captain for helping us identify the photographs and Dr. Subramanian Bhupathy (SACON-Coimbatore) reviewed the manuscript. We express our sincere gratitude to Dr. Asad R. Rahmani, Director, BNHS for his encouragement and valuable comments on the manuscript. The kind help rendered by our colleagues: Dr. Basudev Tripathy and Ishan Agarwal (Wildlife Institute of India, Dehradun)

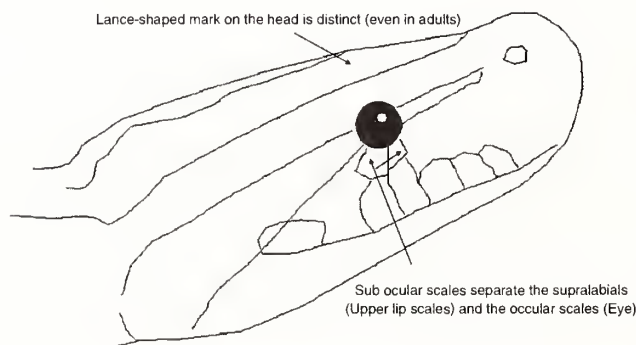


Fig. 1: Schematic diagram to illustrate the identifying features of the Burmese Python *Python molurus bivittatus*

and Dr. Parikshit Gaumtam & Dr. S.K. Behera (WWF-India) is highly appreciated. The first author acknowledges the

Council of Scientific and Industrial Research (HRD Group), New Delhi for awarding a research grant.

REFERENCES

- BHUPATHY, S. (1995): Distribution of *Python molurus bivittatus* in India. *Cobra* 21: 2-5.
- CHOPRA, R.N. (1979): Fauna of Corbett National Park, Uttar Pradesh – Reptiles and Amphibians. *Cheetal* 21(1): 30-31.
- DANIEL, J.C. (2002): The Book of Indian Reptiles and Amphibians. Bombay Natural History Society, Oxford University Press, Mumbai.
- SMITH, M.A. (1943): The Fauna of British India. Reptilia and Amphibia (Vol. III – Serpents). Today and Tomorrow's Printers and Publishers, New Delhi.
- WHITAKER, R. & A. CAPTAIN (2004): Snakes of India: The Field Guide. Draco Books, Chennai, India.

11. REDESCRIPTION OF *GARRA ABHOYAI* HORA (TELEOSTEI: CYPRINIDAE: GARRINAE) WITH A NOTE ON *GARRA RUPECULA* FROM MANIPUR, INDIA¹

W. VISHWANATH^{2,3} AND I. LINTHOINGAMBI^{2,4}

¹Accepted May 10, 2007

²Department of Life Sciences, Manipur University, Canchipur 795 003, Manipur, India.

³Email: wvnath54@yahoo.com, wvnath@gmail.com

⁴Email: ilinthoi@yahoo.com

Introduction:

Fishes of the genus *Garra* Hamilton inhabit bottoms of fast flowing streams and are widely distributed from southern China, across South-east Asia, India and the Middle East to northern and central Africa (Kullander and Fang 2004). The genus is characteristic in having its mouth and its posterior region highly modified into a suctorial disc, also called mental disc.

McClelland (1839) described *Gonorhynchus rupeculus* from Mishmi Hills, Arunachal Pradesh (Brahmaputra basin), India. Gunther (1868) and Day (1878) considered the species a synonym of *Discognathus lamta* (Hamilton). Hora (1921) described *Garra abhoyai* from the streams of Ukhrul district of Manipur (Chindwin basin). Menon (1964), while revising the genus, considered McClelland's (1839) species as valid and redescribed it as *Garra rupecula*, based on specimens only from Chindwin basin in Manipur, an entirely different basin from the type locality. He also considered *Garra abhoyai*, a synonym of *Gonorhynchus rupecula*. Vishwanath (1993) and Vishwanath and Joyshree (2005) also followed earlier literature in treating the validity of *Garra rupecula* of Manipur.

In the present study, several specimens of *Garra*, confirming the description of Hora's (1921) *G. abhoyai* were collected from the hill streams in the Ukhrul and Imphal west districts of the State. The species is considered valid and redescribed here. The status of *G. rupecula* of Manipur is also discussed.

Measurements and counts follow Kullander and Fang

(2004), and that of head depth follow Menon (1964). Scale counts follow Kottelat (2001). Specimens examined for the study are deposited in the Manipur University Museum of Fishes (MUMF). Number in parentheses after a particular count indicates number of specimens examined.

Garra abhoyai Hora

(Figs 1-3)

Garra abhoyai Hora 1921: 664 (type locality Naga Hills, Ukhrul district, Manipur).

Material Examined: MUMF 6296-6305, 10, 49.3-54.90 mm SL, Iril R. at Phungdhar, Manipur, 17.i.2003, K. Nebeshwar, M. Shantakumar and I. Linthoingambi, MUMF 8048-8054 and 8103-8112, 17, 45.0-53.0 mm SL, Nambul R. at Singda, Manipur, 3.xi. 2005, H. Joyshree.

Diagnosis: A small species of *Garra* with smoothly rounded snout tip; rostral lobe absent; proboscis absent; predorsal scales present but those towards head very reduced, irregularly arranged and covered by mucus almost making it appear to be absent; chest and abdominal region naked, however, area just in front of pelvic fin scales covered by mucus; papilliferous tissue absent along the upper jaw; papillations present at an angle of upper and lower lip; lateral line scales 30-33 + 1-3.

Description: General appearance as in Fig. 1. Table 1 presents morphometric data. Body small, maximum standard length 58.7 mm, elongated, predorsal contour straight; body depth almost uniform; ventral aspect flattened from head to anal fin base; snout rounded without transverse groove,